

IN THE CLAIMS



1. (Amended) A printed textile material ~~substrate~~ comprising:

(a) a textile substrate having a first side and a second side;

(b) a UV absorber disposed on the first side of the textile substrate, said UV absorber selected from the group consisting of: benzyltriazoles, hydroxylphenones, and dihydroxybenzylphenones; and

(c) an ink printed image disposed upon the UV absorber adjacent to ~~on~~ the first side of said textile substrate.

2. (Amended) A method of ink jet printing ~~placing~~ an image or design on a substrate to form an printed textile substrate, comprising the steps of:

(a) providing a textile substrate;

(b) providing a first composition having a predetermined amount of a dye fixing/receiving agent and a UV absorber;

(c) coating a first side of said a textile substrate with said first composition a UV absorber;

(d) ink jet printing an the image or design upon said first composition adjacent said onto the first side of the textile substrate that has been coated with the UV absorber;

(e) producing a printed textile substrate comprising a UV absorber in a concentration of from about 0.1% to about 10% of the weight of the treated textile substrate.

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3. (New) A printed article of manufacture, comprising:
- (a) a textile substrate having a first side and a second side;
  - (b) a dye fixing/receiving composition, said dye fixing/receiving composition including an amine-containing cationic compound, said dye fixing/receiving composition being disposed upon said first side of said textile substrate;
  - (c) a UV absorber disposed upon said first side of said textile substrate;
  - (d) an ink disposed on said first side of said textile substrate, said ink comprising an ionic dye;
  - (e) wherein the amount of said UV absorber in said article of manufacture comprises from about 0.1% to about 10% by weight of the article of manufacture.
4. (New) The article of claim 3 wherein the UV absorber is selected from the group consisting of: azole-containing compounds and phenone-containing compounds.
5. (New) The article of claim 3 wherein said UV absorber is selected from the group consisting of: benzyltriazoles, hydroxylphenones, and dihydroxybenzylphenones.
6. (New) The article of claim 3 wherein said ink fixing/receiving composition further comprises an agent selected from the group consisting of: silica, silicate, calcium carbonate, aluminum oxide, aluminum hydroxide, and titanium dioxide.


7. (New) The article of claim 3 wherein said amine-containing cationic compound provides a charge density of at least about 2 milliequivalents per gram.
8. (New) The article of claim 3 wherein said amine-containing cationic compound further comprises a reactive group selected from the group consisting of: epoxides, isocyanates, vinylsulphones, and halo-triazines.
9. (New) The article of claim 3 wherein said printed article of manufacture further a thermoplastic or thermosetting polymeric binder material.
10. (New) The article of claim 3 additionally comprising an antimicrobial agent.
11. (New) A printed article of manufacture, comprising
- (a) a textile substrate having a first side and a second side;
  - (b) a dye fixing/receiving composition, said dye fixing/receiving composition including an amine-containing cationic compound, said dye fixing/receiving composition being disposed upon said first side of said textile substrate;
  - (c) a UV absorber disposed upon said first side of said textile substrate, said UV absorber being selected from the group consisting of: phenone-containing compounds and azole-containing compounds; and
  - (d) an ink disposed upon said first side of said textile substrate, said ink comprising an ionic dye.
12. (New) The article of claim 11 wherein said ink fixing/receiving composition further comprises an ink receiving agent selected from the group consisting of: silica, silicate, calcium carbonate, aluminum oxide,

aluminum hydroxide, and titanium dioxide.

13. (New) The article of claim 12 wherein said ink receiving agent comprises a silica-containing composition.
14. (New) The article of claim 11 wherein said amine-containing cationic compound further comprises a reactive group selected from the group consisting of: epoxides, isocyanates, vinylsulphones, and halo-triazines.
15. (New) The article of claim 11 wherein said dye fixing/receiving composition comprises from about 0.2% to about 20% by weight of the printed article of manufacture.
16. (New) The article of claim 11 additionally comprising a binder.
17. (New) The article of claim 16 wherein said binder comprises a resin.
18. (New) The article of claim 11 additionally comprising an antimicrobial agent.
19. (New) A printed article manufactured by the method comprising:
- (a) providing a first substrate having a first side and a second side, and
  - (b) applying a treatment mixture to said first side of said first substrate, said treatment mixture comprising: (i) a reactive dye fixing/receiving composition, said dye fixing/receiving composition including an amine-containing cationic compound, said dye fixing/receiving composition being disposed upon said first side of said textile substrate, and (ii) a UV absorber, thereby forming a treated substrate; and
  - (c) heating said treated substrate to a temperature of at least about 100 degrees Centigrade, thereby facilitating the activation and bonding of

said amine-containing cationic compounds to fix said amine-containing compounds upon said first substrate; and

(d) applying an ink having an ionic dye upon said first side of said treated textile substrate to form a printed substrate, thereby facilitating chemical interaction of said ionic dye with said amine-containing cationic compound.

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20. (New) The article according to claim 19, wherein said treatment mixture additionally comprises a binder.
21. (New) The article of claim 20, wherein said binder is selected from the group of binders comprising: latex binders and resin binders.
22. (New) The article according to claim 19 wherein said temperature is between about 100 and 150 degrees Centigrade.
23. (New) The article of claim 19 wherein UV absorber is selected from the group consisting of: azole-containing compounds and phenone-containing compounds.
24. (New) The article of claim 19 wherein said UV absorber is selected from the group consisting of: benzyltriazoles, hydroxylphenones, and dihydroxybenzylphenones.
25. (New) The article of claim 19 wherein said ink fixing/receiving composition further comprises an agent selected from the group consisting of: silica, silicate, calcium carbonate, aluminum oxide, aluminum hydroxide, and titanium dioxide.
26. (New) The article of claim 19 wherein said amine-containing cationic

compound comprises a charge density of at least about 2 milliequivalents per gram.

27. (New) The article of claim 19 wherein said amine-containing cationic compound further comprises a reactive group selected from the group consisting of: epoxides, isocyanates, vinylsulphones, and halo-triazines.

28. (New) The article of claim 19 wherein said article further comprises a thermoplastic or thermosetting polymeric binder material.

29. (New) The article of claim 19 additionally comprising an antimicrobial agent.

30. (New) A printed article manufactured by the method comprising:

(a) providing a first substrate having a first side and a second side, and

(b) applying a treatment mixture to said first side of said first substrate, said treatment mixture comprising: (i) a reactive dye fixing/receiving composition, said dye fixing/receiving composition including an amine-containing cationic compound, said dye fixing/receiving composition being disposed upon said first side of said textile substrate, and (ii) a UV absorber, thereby forming a treated substrate; and

(c) wherein said UV absorber comprises from about 0.1% to about 10% by weight of said article; and

(d) applying an ink having an ionic dye upon said first side of said treated textile substrate to form a printed substrate, thereby facilitating chemical interaction of said ionic dye with said amine-containing cationic compound.

31. (New) The article of claim 30, wherein said application step (d) comprises ink jet type printing.

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32. (New) The article of claim 30, wherein said treatment mixture further comprises a binder, said binder being selected from the group of binders comprising: latex binders and resin binders.
33. (New) The article according to claim 30 wherein following said application step (b) said treated substrate is heated to a temperature of at least about 100 degrees Centigrade.
34. (New) The article of claim 30 wherein UV absorber is selected from the group consisting of: azole-containing compounds and phenone-containing compounds.
35. (New) The article of claim 30 wherein said UV absorber is selected from the group consisting of: benzyltriazoles, hydroxylphenones, and dihydroxybenzylphenones.
36. (New) The article of claim 30 wherein said ink fixing/receiving composition further comprises an agent selected from the group consisting of: silica, silicate, calcium carbonate, aluminum oxide, aluminum hydroxide, and titanium dioxide.
37. (New) The article of claim 30 wherein said amine-containing cationic compound comprises a charge density of at least about 2 milliequivalents per gram.
38. (New) The article of claim 30 wherein said amine-containing cationic compound further comprises a reactive group selected from the group consisting of: epoxides, isocyanates, vinylsulphones, and halo-triazines.
39. (New) The article of claim 30 wherein said article further comprises a

thermoplastic or thermosetting polymeric binder material.

40. (New) The article of claim 30 additionally comprising an antimicrobial agent.

41. (New) A printed article manufactured by the method comprising:

(a) providing a first substrate having a first side and a second side, and

(b) applying a treatment mixture to said first side of said first substrate, said treatment mixture comprising: (i) a reactive dye fixing/receiving composition, said dye fixing/receiving composition including an amine-containing cationic compound, said dye fixing/receiving composition being disposed upon said first side of said textile substrate, and (ii) a UV absorber, wherein said UV absorber is selected from the group comprising: phenone-containing compounds and azole-containing compounds, thereby forming a treated substrate; and

(c) applying an ink having an ionic dye upon said first side of said treated textile substrate to form a printed substrate, thereby facilitating chemical interaction of said ionic dye with said amine-containing cationic compound.

42 (New) The article of claim 41, wherein said application step (c) comprises ink jet type printing.

43. (New) The article of claim 41, wherein said treatment mixture further comprises a binder, said binder being selected from the group of binders comprising: latex binders and resin binders.

44. (New) The article according to claim 41 wherein following said application step (b) said treated substrate is heated to a temperature of at least about 100 degrees Centigrade.

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45. (New) The article of claim 41 wherein said UV absorber is applied so as to result in an article having a weight of UV absorber of between about 0.1% and about 10% of the weight of the article.
46. (New) The article of claim 41 wherein said UV absorber is selected from the group consisting of: benzyltriazoles, hydroxylphenones, and dihydroxybenzylphenones.
47. (New) The article of claim 41 wherein said ink fixing/receiving composition further comprises an agent selected from the group consisting of: silica, silicate, calcium carbonate, aluminum oxide, aluminum hydroxide, and titanium dioxide.
48. (New) The article of claim 41 wherein said amine-containing cationic compound comprises a charge density of at least about 2 milliequivalents per gram.
49. (New) The article of claim 41 wherein said amine-containing cationic compound further comprises a reactive group selected from the group consisting of: epoxides, isocyanates, vinylsulphones, and halo-triazines
50. (New) The article of claim 41 wherein said article further comprises a thermoplastic or thermosetting polymeric binder material.
51. (New) The article of claim 41 additionally comprising an antimicrobial agent.
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